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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
EDWIN NUN, ET AL.	: EXAMINER: O'HERN, BRENT T.
SERIAL NO: 10/506,993	:
FILED: SEPTEMBER 9, 2004	: GROUP ART UNIT: 1772
FOR: SHAPING METHOD FOR PRODUCING SHAPED BODIES WITH AT LEAST ONE SURFACE THAT HAS SELF-CLEANING PROPERTIES, AND SHAPED BODIES PRODUCED ACCORDING TO THIS METHOD	:

APPEAL BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is an appeal of the Rejection dated April 30, 2007 of twice-rejected Claims 11-20. A Notice of Appeal was timely filed on July 24, 2007.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Degussa AG, having an address at Bennigsenpatz 1, D-40474 Duesseldorf, Germany.

II. RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' legal representative and the assignee are aware of no appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF THE CLAIMS

Claims 11-20 stand rejected and are herein appealed. Claims 1-10 stand withdrawn from consideration.

IV. STATUS OF THE AMENDMENTS

No amendment under 37 CFR 1.116 has been filed.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent Claim 11 is drawn to a molding comprising at least one surface having self-cleaning properties and surface structures with elevations formed by directly embedding microparticles into the molding, wherein the molding is produced by:

accreting primary particles to form microparticles,

wherein said microparticles have hydrophobic properties and said microparticles comprise agglomerates or aggregates of from 0.2 to 100 μm,

applying the microparticles to the inner surfaces of a mold,

molding a molding composition,

wherein the molding composition comprises at least one material comprising organic compounds and said molding composition is in softened or molten form, and

thermally shaping the molding composition in the mold, and

solidifying the molding composition to obtain the molding,

wherein not more than 90% of the diameter of at least 50% of the microparticles are impressed into the surface of the molding which has not yet solidified,

said microparticles are firmly held by the molding to anchor said microparticles into the molding after the molding is solidified,

said molding has elevations formed by the microparticles and

said molding has at least one surface having self-cleaning properties.

See original Claims 11 and 1-10, and the specification at page 3, lines 4-15, combined with page 6, lines 7-15 and page 7, lines 29-31.

Independent Claim 17 is drawn to a molding comprising at least one surface having self-cleaning properties and surface structures with elevations, wherein the molding comprises at least one material comprising organic compounds and the molding is capable of being in softened or molten form and of being thermally shaped and wherein the surface structures are formed by hydrophobic microparticles embedded directly into the molding.

See the specification at page 3, lines 4-15, combined with page 6, lines 12-15 and page 8, lines 6-10.

VI. GROUNDS OF REJECTION

Ground (A)

Claims 11-14 and 16-19 stand rejected under 35 U.S.C. § 102 (b) as anticipated by US 6,783,807 (Hüffer et al).

Ground (B)

Claims 15 and 20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hüffer et al in view of US 6,800,304 (Baumann et al).

VII. ARGUMENT

Ground (A)

Claims 11-14 and 16-19 stand rejected under 35 U.S.C. § 102 (b) as anticipated by Hüffer et al. That rejection is untenable and should not be sustained.

Hüffer et al relates to a process for coating apparatuses and apparatus parts for chemical plant construction, wherein protuberances having a mean height of from 100 nm to 50 μm with a mean spacing of from 100 nm to 1000 μm are produced on the surface to be coated and the coating is supplied thereon by currentless deposition of a metal layer or of a metal-polymer dispersion layer with the aid of a plating bath which contains a metal electrolyte, a reducing agent and optionally a polymer or polymer blend to be deposited, in dispersed form (paragraph bridging columns 3 and 4). The coated surfaces resulting from the process are disclosed as "particularly strongly adhering, durable and heat-resistant" (column 7, lines 56-60). In addition, the coated surfaces are disclosed as having excellent mechanical stability and wear resistance (column 9, lines 61-65).

The present invention, as recited in Claim 11, on the other hand, requires the surface structures to be formed by **directly embedding** microparticles into **inner surfaces of a mold** which contains a **molding** composition comprising **organic compounds** and made of materials which are **in softened or molten form**, and undergo **thermal shaping** while in the mold, wherein **not more than 90% of the diameter of at least 50% of the microparticles** are impressed into the surface of the molding which has not yet solidified, followed by solidification of the molding in the mold, thereby anchoring the microparticles in the solidified molding (emphasis added.)

In the Office Action, the Examiner dismisses the above-emphasized limitations, and other limitations of the claims as process limitations. The Examiner finds, in effect, that all

process limitations can be ignored. However, it is clear that to the extent process limitations distinguish the claimed molding from the prior art, they must be considered. Thus, there is no indication that any of the apparatus or parts thereof disclosed by Hüffer et al softens or melts in any way when their currentless coating layer is applied. Indeed, since Hüffer et al's surfaces are disclosed as durable and heat resistant, Hüffer et al actually teach away from the use of a surface which can be softened or molten, or thermally shaped. Thus, the protuberances formed as a result of the coating cannot possibly be embedded in the underlying parts.

While present Claim 17 and claims dependent thereon do not contain all of the above-emphasized limitations, nevertheless, these claims still distinguish over Hüffer et al since, for reasons discussed above, Hüffer et al's protuberances are not embedded in the surface of their apparatus parts, nor are these apparatus parts capable of being in softened or molten form or of being thermally shaped.

For all the above reasons, it is respectfully requested that this rejection be REVERSED.

Ground (B)

Claims 15 and 20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Hüffer et al in view of Baumann et al. That rejection is untenable and should not be sustained.

Hüffer et al and its deficiencies have been discussed above. Baumann et al does not remedy these deficiencies.

Baumann et al also discloses particles deposited onto a substrate through a coating process. Because neither Baumann et al nor Hüffer et al discloses or suggests directly embedding particles into the molding as required by the claims, these references alone or in

combination cannot render obvious the claimed invention. In other words, Baumann et al cannot compensate for Hüffer et al's fatal deficiencies.

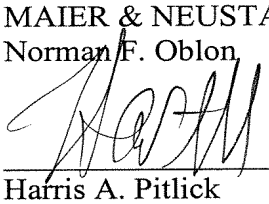
For all the above reasons, it is respectfully requested that this rejection be REVERSED.

VIII. CONCLUSION

For the above reasons, it is respectfully requested that the rejections be REVERSED.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon



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CLAIMS APPENDIX

11. A molding comprising at least one surface having self-cleaning properties and surface structures with elevations formed by directly embedding microparticles into the molding, wherein the molding is produced by:

accreting primary particles to form microparticles,

wherein said microparticles have hydrophobic properties and said

microparticles comprise agglomerates or aggregates of from 0.2 to 100 μm,

applying the microparticles to the inner surfaces of a mold,

molding a molding composition,

wherein the molding composition comprises at least one material comprising

organic compounds and said molding composition is in softened or molten

form, and

thermally shaping the molding composition in the mold, and

solidifying the molding composition to obtain the molding,

wherein not more than 90% of the diameter of at least 50% of the microparticles are impressed into the surface of the molding which has not yet solidified,

said microparticles are firmly held by the molding to anchor said microparticles into the molding after the molding is solidified,

said molding has elevations formed by the microparticles and

said molding has at least one surface having self-cleaning properties.

12. The molding as claimed in claim 11, wherein the elevations have an average height of from 20 nm to 25 μm and an average separation of from 20 nm to 25 μm.

13. The molding as claimed in claim 12,

the elevations have an average height of from 50 nm to 4 μm and/or an average separation of from 50 nm to 4 μm.

14. The molding as claimed in claim 11, wherein

the molding comprises microparticles and the microparticles are selected from the group consisting particles of silicates, minerals, metal oxides, metal powders, silicas, pigments, polymers and mixtures thereof.

15. The molding as claimed in claim 11, wherein

the molding comprises impressed particles and the impressed particles are anchored with from 10 to 90% of their average particle diameter within the surface of the molding.

16. The molding as claimed in claim 11, wherein

the molding is a three-dimensional article selected from the group consisting of vessels, lampshades, buckets, bottles, tires, automotive tires, storage vessels, drums, dishes, measuring beakers, funnels, tanks, splash guard components, discharge aids, and housing parts.

17. A molding comprising at least one surface having self-cleaning properties and surface structures with elevations, wherein the molding comprises at least one material comprising organic compounds and the molding is capable of being in softened or molten form and of being thermally shaped and wherein the surface structures are formed by hydrophobic microparticles embedded directly into the molding.

18. The molding as claimed in claim 17, wherein the elevations have an average height of from 20 nm to 25 μm and an average separation of from 20 nm to 25 μm.

19. The molding as claimed in claim 17, wherein the microparticles are selected from the group consisting particles of silicates, minerals, metal oxides, metal powders, silicas, pigments, polymers and mixtures thereof.

20. The molding as claimed in claim 17, wherein 10 to 90% of the average particle diameter of the microparticles is within the surface of the molding.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.